OCEANREEF®
connecting divers

Neptune System 2012

Neptune System 2 0 1 2

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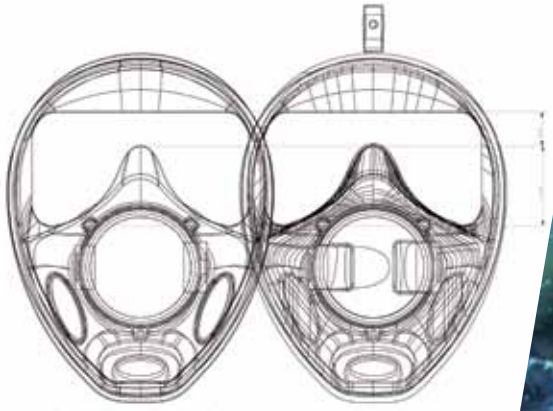
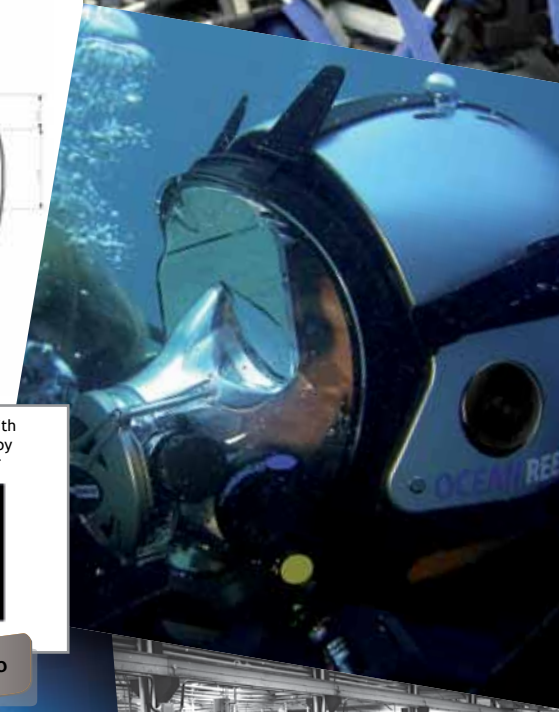


OCEAN REEF has 60 years of experience molding rubber goods and working in several different markets:

- Fashionable rubber, silicone, plastic, & multi-compound watch components
- Military protection equipment
- Respiratory PPE
- Molding of silicone, liquid silicone, rubber, plastic, and thermoplastic goods
- Engineering and manufacturing of molds for rubber/silicone plastic and thermo rubber Full face masks and underwater communication systems for diving application

The OCEAN REEF Group factories are in Genoa, Italy (Mestel Safety S.r.L - 50,000 sq. ft.) and San Diego, California, USA (OCEAN REEF Inc.- 6,000 sq. ft.) 'MESTEL Safety SrL is an ISO 9001-2000 certified company and also a NATO classified supplier.

The production facility includes injection and compression presses, electronic components assembly, finished goods assembly, and testing department. The R&D includes a sophisticated rubber/silicone compounds testing laboratory, an advanced computerized self-contained breathing monitor apparatus, a 32,000 liter pool with computerized ultrasonic underwater communication control system, closed circuit audio/video for demonstration and training, and two Pro E working stations for product engineering and mold design.



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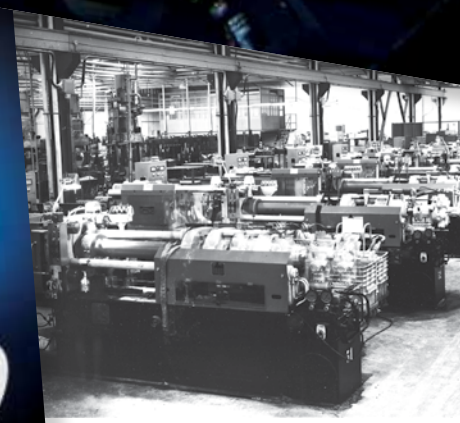


The Neptune System

During 60 years of involvement in the diving industry, OCEAN REEF has learned the importance of professional and commercial diving in the industry. Whatever the type of diving, most commercial and professional divers require a high-tech, durable, efficient, safe, and comfortable diving system. OCEAN REEF has developed a full face mask (integrated mask and regulator) with underwater communications called the Neptune System. This system easily accomplishes all requirements or such demanding conditions in a user-friendly way.

The Neptune System is not just a full face mask. It is an aggregation of diving components: a mask with a large field of vision, a durable LEDs torch, an superior and comfortable regulator, an easy to read, heads up display, and a compact and powerful underwater communication device.

OCEAN REEF's revolutionary full face masks are the product of intense research and valuable experience acquired in the development and production of military protection equipment. The surface-based versions of our full face mask have received international approval for use in the civil sector and have been adopted by specialized departments in numerous military and defense organizations for use in Nuclear, Biological, and Chemical (NBC) operations. From the Gulf Wars/Homeland security program to Antarctic expeditions, from military use to space exploration, from commercial to recreational activities, the Full Face Mask Project, which started in 1985, and involved over 50 different types of masks, has experienced a diverse range of conditions and applications. With the development of the Neptune Full Face masks for underwater use, OCEAN REEF is now recognized worldwide as —THE FULL FACE MASK COMPANY, wherever you dive.

The Neptune System full face masks

There are 5 main models in the OCEAN REEF Full Face Diving Mask line. They all have common features, but each one has unique and specific characteristics and applications.

Adaptability – Face seal – sizes

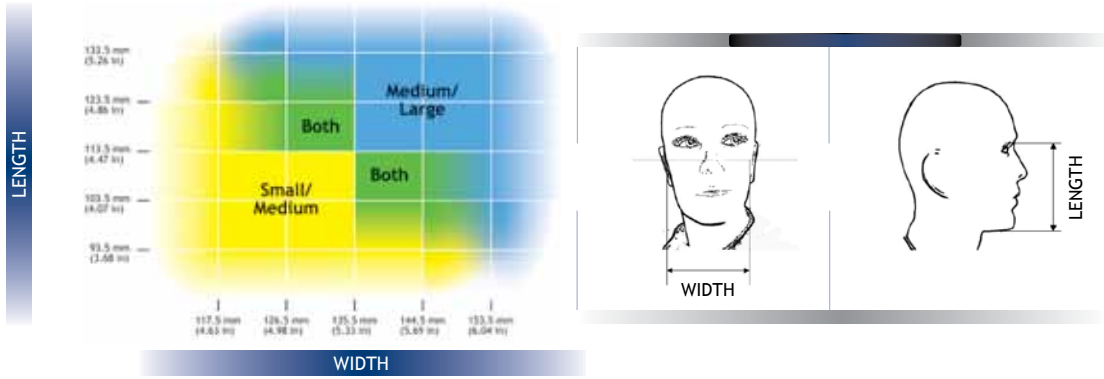
The patented bellows-type skirt with a “spring profile” has a large sealing surface (30-45 mm, double that of a conventional mask). The spring effect is achieved by a combination of the double “S” section and the inner support ribs, resulting in a comfortable fit and ample support. This allows the mask to “float” comfortably on the face. The face seal and strap concepts are OCEAN REEF patents.

>>>> Neptune Mask face seal
MEDIUM/LARGE and SMALL/MEDIUM

The majority of the models may be supplied with two sizes: Small/Medium and Medium/Large.
In order to determine whether a diver should wear a S/M or M/L mask, OCEAN REEF has designed a Mask Measuring Kit (code 33075).

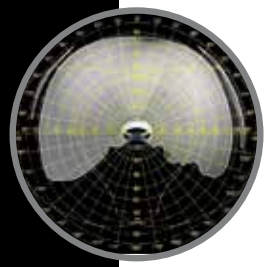
The sizing and measuring system were designed in accordance with the official measuring procedure used in the Los Alamos Scientific Laboratory Charts at the SBCCOM Mask Fit Facility-Aberdeen Proving Ground (Maryland, USA). Before purchasing a mask, use the caliper to take two simple face measurements. Using the Full Face Mask Size Recommendation Chart, it is possible to evaluate the size category into which the measurements fall.
There are three different size categories on the chart: Small/Medium, Both, and Medium/Large. If the measurements fall within the both category, then the customer should technically be able to wear either size (MEDIUM/LARGE or SMALL/MEDIUM), and in that case they should try on a mask to select the best fit.

Please note that the chart boundaries fade. The fading areas represent less common face measurements. It is very likely that a mask will still fit comfortably even if measurements are located in these fading areas.



Technical characteristics

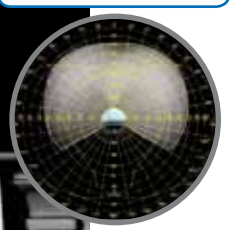
>>>> Neptune Space



Visual field

The Neptune Space visor is made of transparent polycarbonate. It is designed to be wider and sit closer to the face than previous full face masks. This design maximizes the visual field, particularly the peripheral area. The visible light transfer of the visor is 92%.
Required field of vision (effective) >40% of the natural field of vision – Space masks 71.80%.
Required field of vision (binocular) >50% of binocular natural field of vision – Space masks 80.68%
Italcert certification PPE-05 Rif 1332/05
The insert photos show the visual field of the Neptune Space compared with two competitor's full face masks.

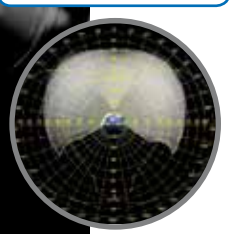
>>>> Aga Interspiro



Durability and scratching resistance

The visor of the Neptune Space can resist the impact of a 6.35 mm steel ball traveling at speeds of 540 kph (335 mph). The visor is coated on both sides with a siloxane resin to increase the scratching and chemical resistance.
Tested by STANAG 4296 = resistance to the impact of a 325mg metal fragment with a speed of 240 m/s and Impact resistance test: 39.3 mm/254 g sphere from 1300 mm, no cracking or added protection during transport, the Neptune Space comes with a removable protective shield (to be removed before diving).

>>>> Guardian



The head harness and FRB II

The head harness is directly attached to the face shield, allowing pressure to be distributed equally along the mask skirt. The six straps of the head harness hold the mask in a firm position due to their low elasticity. The tip of each strap (rubber) is wider, making them easier to grasp while wearing neoprene gloves. The FRB II (Raptor and Space Fast Rotating Buckle) allows the mask to be donned and doffed quickly. Predator and IRON MASK use an AISI 316 stainless steel with surface electric treatment and AISI 316 stainless steel rollers.

Air circulation

The Neptune Space air circulation system is designed to minimize fogging and reduce the amount of CO and CO2 buildup.
The silicone orinasal pocket is built with two one way valves through which air is inhaled. Exhaled air is directed through a valve under the orinasal pocket, limiting the mixing of this air (containing high amounts of CO2) with the fresh air from the regulator. The direction of exhaled air is controlled by a directional exhaust valve. This adjustable valve allows exhaust to flow in four possible directions:

A - To the left
B - To the right
C - Both (direction of least resistance)
D - No exhaust

Position D, the “off” position is used when the diver is in a “head-down” position which, due to pressure on the second stage, causes the regulator to free flow. Placing the exhaust valve in the off position causes pressure to build in the mask, preventing free flow and returning the system to an “air on demand” situation.

Surface air valve

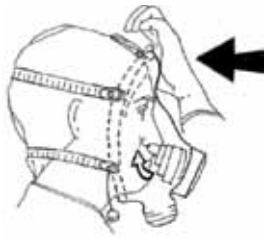
The Neptune Space is equipped with a surface air valve that allows the diver to breathe ambient air while at the surface. The surface air valve is easily adjustable with large air vents.

Draining and pressure equalization

Water that may seep into the mask is easily eliminated by exhaling or pushing the “purge” button on the 2nd stage. Mask squeeze, a common problem for conventional masks, will not occur with the Neptune Space because the pressure inside the mask is equal to the pressure outside the mask.

The 3-D equalization system

The patented OCEAN REEF 3-D equalization system is designed to allow easy equalization during a dive. The system consists of a movable plate and two eccentric blocks (these blocks move close to the nostrils when the upper part of the visor is pressed). When equipped with Visor Lights (see after), use the regulator to push the mask toward your face, creating a nasal seal. The blocks plug the diver’s nose allowing equalization.



Before donning the mask, the blocks may be moved up or down depending on the length of the diver’s nose. They may also be adjusted to fit wide or narrow noses. The system also includes three pairs of extenders (3, 6, 10mm long) which allow the distance between the blocks and the nose to be modified to accommodate the diver’s face. The 3-D equalization system makes diving more comfortable and inhibits any undesired pressure during a dive.

Regulator characteristics

The Neptune masks are equipped with a pneumatically balanced second stage providing a consistent ease of breath at any tank pressure. An inhalation adjustment feature allows the diver to control air delivery under a variety of diving conditions. The system works with 2 coaxial springs. The Dive/Pre-dive (Venturi) lever reduces free flow on the surface and provides maximum air flow while at depth.
The Neptune Space mask complies with CE Certification in accordance with 89/689/EEC directives under the UNI EN250 standard rules for underwater activities, including low temperatures (<50°F/ <10°C).

CE low temperature approval by Germanisher Lloyd.

Scan this picture with your smart-phone by using TAG Reader

watch the video

Technical characteristics

1st Stage SL35TX

The Neptune Space has been CE certified with the 1st stage (sold separately) SL35TX high performance, balanced diaphragm 1st stage with anti-freeze kit.
The first stage has adjustable intermediate pressure and is made of brass with a plated chromed finish body, stainless steel piston, Teflon seat, and stainless steel spring. It is available with the following characteristics:
Standard yoke connection 200 bar (for the code 9922)
DIN connection 300 bar (for the code 9923)
> 2 high pressure ports 7/16 -20 UNF
> 4 low pressure ports 3/8-24 UNF
> Flow rate of approx. 4800 l/m at 140 bars

SL35TX INT (code 9922)
SL35TX DIN 300 bar (code 9923)
SL35TX Nitrox M26x2 (code OR009927)
Thread in according with European rules

Neptune Space complies with CE Certification in accordance with 89/689/EEC directives under the UNI EN250 standard rules for underwater activities, including low temperatures (<50°F).

Packaging

The Neptune Space mask comes in a padded zipper bag, designed to hold other equipment such as a first stage and diver underwater communication, along with the following items:

> 1st stage LP connecting hose
> Visor protection
> User's manual
> Screw driver
> Extensions for equalization (3 sets of 3 -6 -10 mm)
> Full Face Mask Diver Registration Card and Limited Lifetime warranty.

Neptune Space Iron Mask

iron mask

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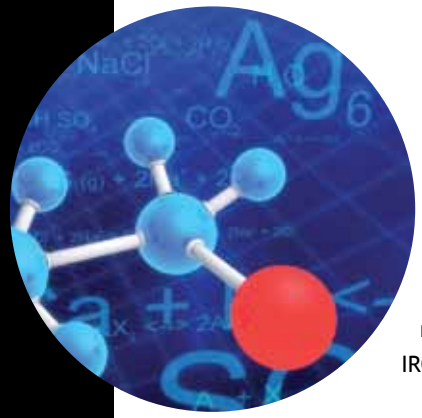
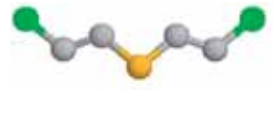
watch the video



The Neptune Space IRON MASK is OCEAN REEF's top of the line mask specifically designed for use in contaminated water.
Each external part in direct contact with high amounts of chemicals and aggressive hydrocarbons has been made with special raw materials. In particular, the IRON Mask has the following unique parts:

> Inhalation diaphragm, Exhalation valve, Purge button and Face seal composed of FVMQ rubber
> Stainless steel AISI 316 frame, buckles and adjustment knob
> Anodized Anticorodal®, Front Cover.

The sturdy feeling of the mask's design allows divers to make sensitive micro adjustments to the airflow, even when using gloves. Surface treatments protect the mask from salt water damage and tech polymer protection treatments allow the Neptune Space IRON MASK to be used in extreme conditions.
The Glacier strap is composed of HNBR rubber compound for extreme low temperatures.
Total weight 1090g (2.40lb) with a positive buoyancy of 172g (0.40lb)
> Limited lifetime warranty.



The Neptune Space full face masks

Neptune Space PREDATOR

The Neptune Space PREDATOR mask is constructed with parts made of Anodized Anticorodal®, a light weight and durable aluminum compound used in aeronautics for applications requiring high mechanical resistance. The front cover of the mask's state-of-the-art integrated regulator is made of laser-cut Anodized Anticorodal® and has a light gold finish. The adjustable knob, its internal trim screw, the laser-cut hand finished frame, and the six fast release buckles are all made of AISI 316 stainless steel. The sturdy feeling of the mask's design allows divers to make sensitive micro adjustments to the airflow, even when using gloves. The Neptune Space Predator includes the Glacier Strap. This strap is made from a HNBR rubber compound for extreme low temperatures. The total weight of the mask is 1030 g (2.28lb) with a positive buoyancy of just 232 g (0.5lb), creating a light and comfortable fit. The Neptune Space Predator is a nitrox compatible mask up to 40%. The PREDATOR is specifically designed for professional and high performance applications and comes with a Limited Lifetime Warranty.

Neptune Space RAPTOR

The RAPTOR is an O2 cleaned mask. The o-rings are composed of Viton and the o-ring lubricant is a Christo-lube oxygen compatible grease. The Raptor distinguishes itself by the black Ixef® polyaramide cover and the black orinasal cavity, making it the all black mask. The Neptune Space Raptor includes a Limited Lifetime Warranty.

Neptune Space

It is the most popular mask of the Neptune System. It is available with 2 sizes and 3 colors (black, yellow and orange). It is the most popular mask for public safety teams, police departments, and all kind of applications where it is a necessity to have a durable, efficient and high performance full face mask. The total weight of the mask is 860 g (1.89 lbs) with a positive buoyancy of 400 g (0.89 lb), creating a light and comfortable fit. Nitrox compatible up to 40%. The Neptune Space also includes a Limited Lifetime Warranty.

neptune space			
Neptune Space IRON MASK	Red	Medium/large	OR025021
Neptune Space PREDATOR	Black	Small/Medium	33368
		Medium/Large	33369
Neptune Space RAPTOR	Black	Small/Medium	OR025001
		Medium/Large	OR025002
Neptune Space	Black	Small/Medium	33372
		Medium/Large	33373
	Orange	Medium/Large	OR025019
	Yellow	Medium/Large	33378

Neptune Space 50/60PSI

These masks have the intermediate pressure of the regulator set up at 50/60 PSI allowing the use of it with an alternative surface air supply (hookah). Performance of the Neptune Space 50/60 regulator depends on the stability of intermediate pressure provided by the surface air line supply. The Neptune Space 50/60 PSI also includes a Limited Lifetime Warranty.

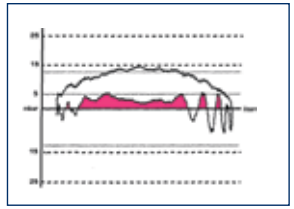
neptune space 50/60PSI			
Black	Small/Medium	33366
	Medium/Large	33367

Neptune II Mask

The Neptune II mask is for use with your conventional regulator. The mask includes 3 DIN thread ports, two of which for the installation of a conventional 2nd stage regulator by removing the mouthpiece and using a specific dedicated connector (medium size (if individually required: code 33021); a small size regulator connector (code 33020) is available as a separated accessory). The third port is available for the installation of an underwater communication unit. The 2nd stage may be installed in the front or left side of the mask. The in air weight is less than 600 grams (22.00 0z). The NEPTUNE II mask has a limited lifetime warranty.

Use of over-injected regulators

Over injected regulators have a diaphragm with an inhalation cracking pressure below zero. These regulators “free flow” easily, and as a result, should not be used with the NEPTUNE II masks. Ask OCEAN REEF customer service for the best choice.



Neptune Space Mask Accessories

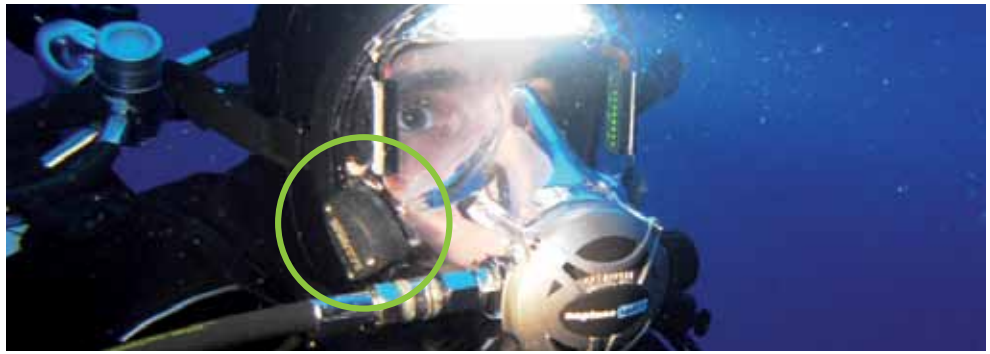
DDR (Dive Data Recorder) (code OR033141)

Diving computers record the dive data of the diver and is a helpful system in recording the “dive history/log” of a single diver. OCEAN REEF has designed a dive data logging device for full face mask: The DDR - Dive Data Recorder.

The DDR is a small, lightweight, self-powered recorder of the main dive parameters: time, depth and temperature. Its 10 year autonomy makes it an asset well worth adding to your OCEAN REEF full face mask. A full face mask is a hi-tech product with an integrated regulator. It is a strong and sophisticated piece of diving gear that requires proper care and servicing. The DDR can also help maintain proper service scheduling.

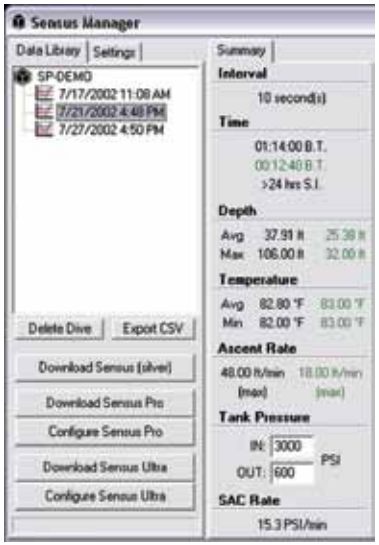
For business or commercial purposes, the full face mask might be shared or used by different divers.Thanks to the DDR, a complete and precise log of its activity is generated by showing the number of dives, the kind of dives, the depth reached, the dive profile, the water temperature and other data that may be of great importance in terms of proper maintenance, care, performance and managing of the entire full face mask.

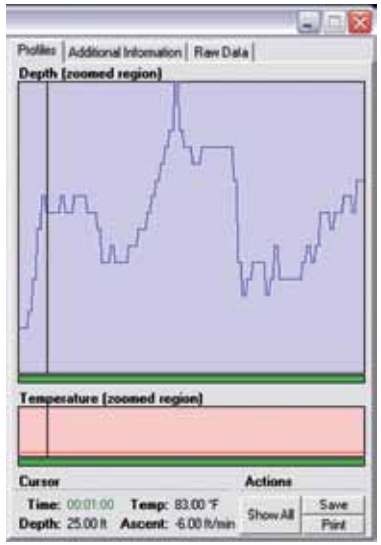
The DDR is very small (1.65” x 1.26” x 0.75” / 42 x 32 x 19 mm) and is installed at the factory on the right side of the full face mask visor. (Any state-of the-art OCEAN REEF Space, Raptor, Predator or IRON MASK may be equipped with a DDR.)



The battery, sophisticated sensor, flash memory and processor (capable of storing 1,500 hours of dive data with a 10 second sampling interval) are all sealed and protected in the DDR housing.
Three sealed screws affix the small unit on the side of the full face mask visor.

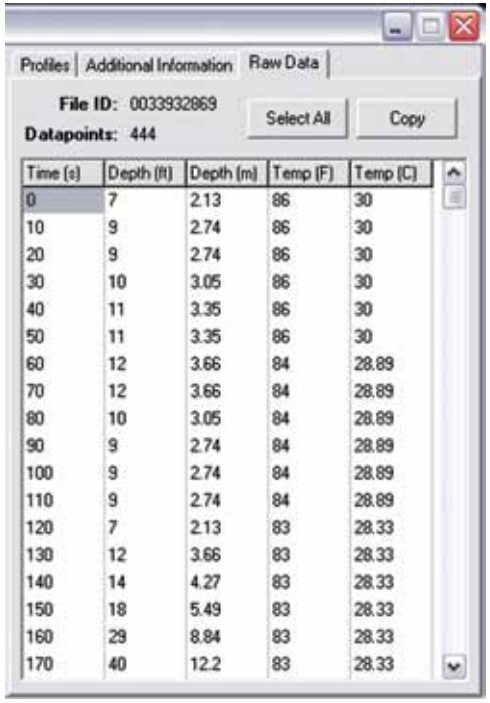
The DDR is ready to be used and will automatically record depth and temperature profiles for all your dives when activated through water contact. Downloading your dive data to your computer takes just a couple of mouse clicks utilizing the bundled software.





Dive Data recorder interface for pc with USB cable (Code OR033142)

The DDR interface is clean, organized, and easy to use. All features are accessed from a single screen, divided into tabs with different functions.
Mask dives are sorted by device (if you own multiple recorders) and by date. Downloading is as simple as pressing a button… as is changing the sampling rate and other device parameters!
Choosing a dive generates a convenient, logbook-style dive summary. Everything you need to know is at a glance: bottom time, surface interval, average and max depths, average and minimum temperatures, and your maximum ascent rate. You can even enter your tank pressures to calculate SAC rate!
Detailed depth and temperature profiles are stored for every dive. A convenient and unobtrusive cursor allows you to investigate points of interest. Drag the mouse to zoom in and view highly detailed data.



Time (s)	Depth (ft)	Depth (m)	Temp (F)	Temp (C)
0	7	2.13	86	30
10	9	2.74	86	30
20	9	2.74	86	30
30	10	3.05	86	30
40	11	3.35	86	30
50	11	3.35	86	30
60	12	3.66	84	28.89
70	12	3.66	84	28.89
80	10	3.05	84	28.89
90	9	2.74	84	28.89
100	9	2.74	84	28.89
110	9	2.74	84	28.89
120	7	2.13	83	28.33
130	12	3.66	83	28.33
140	14	4.27	83	28.33
150	18	5.49	83	28.33
160	29	8.84	83	28.33
170	40	12.2	83	28.33

Want access to the raw data recorded by your device? You got it. The Raw Data panel provides a spreadsheet-style table of all the data points recorded for each dive. You can even COPY and PASTE the data into other documents: Excel, Word, Matlab.

Neptune Space Mask Accessories

Remarkable precision

Dive computers typically record data with a resolution/accuracy of 1 foot in depth and 1 degree in temperature. This is fine for recreational dive logging. However, for technical diving or scientific purposes, it's rather coarse. The DDR is over 20 TIMES BETTER than that:

• Depth is resolved to better than 0.5 inches of water, with accuracy of +/- 1 ft
• Temperature is resolved to 0.01° C (~ 0.02° F), with accuracy of +/- 0.8° C.
In the scientific market, this increased resolution allows the DDR to compete very favorably with far more expensive depth/temperature monitoring devices.
*It is important to distinguish between resolution and accuracy. Resolution specifies the smallest change that can be detected, whereas accuracy specifies the "correctness" of the data.

Configurable options

Standard set up allows for the storage of numerous types of data in the DDR; including the full face mask serial number and production manufacturing information, along with all details of the pre-installed accessories (SDVL-visor lights, etc). You may also enter additional data and have more control over how your data is recorded by configuring a number of device parameters using our bundled software:
• Sampling Interval - Default 10 seconds. Configurable from 1 second to over 18 hours.
Example: A diver might select a longer sampling interval to extend the DDR recording time.
• Activation Depth - Default 3 fsw. Configurable in mbar (absolute).
Example: While diving at high-altitude, you may wish to reduce the activation pressure accordingly.
• End-Timer - Default 15 samples. (I.e. The number of continuous samples above the activation depth which signal the completion of a dive.)
Example: Dive instructors could extend the timer to prevent brief ascents (talking with students) from terminating the dive record prematurely.
• User Data Storage - Approximately 16 kB of storage in the recorder is reserved for your private use. You may store certification data, medical information, or any other data in this space. If you wish, this data may be securely encrypted with a password. This is extremely important when considering the importance and full control of a sophisticated product like a full face mask with integrated regulator.

Easy-to-use software

The DDR/ Manager software makes reviewing your dive profiles simple and convenient. This software is provided at no cost to the end-user and may be downloaded from our website:
www.oceanreefgroup.com/techservice.html
Profile data from a DDR can be quickly downloaded to ALL major computer platforms including: Windows, Mac, Linux, Palm, Pocket PC, etc. (some supported only with third-party software).

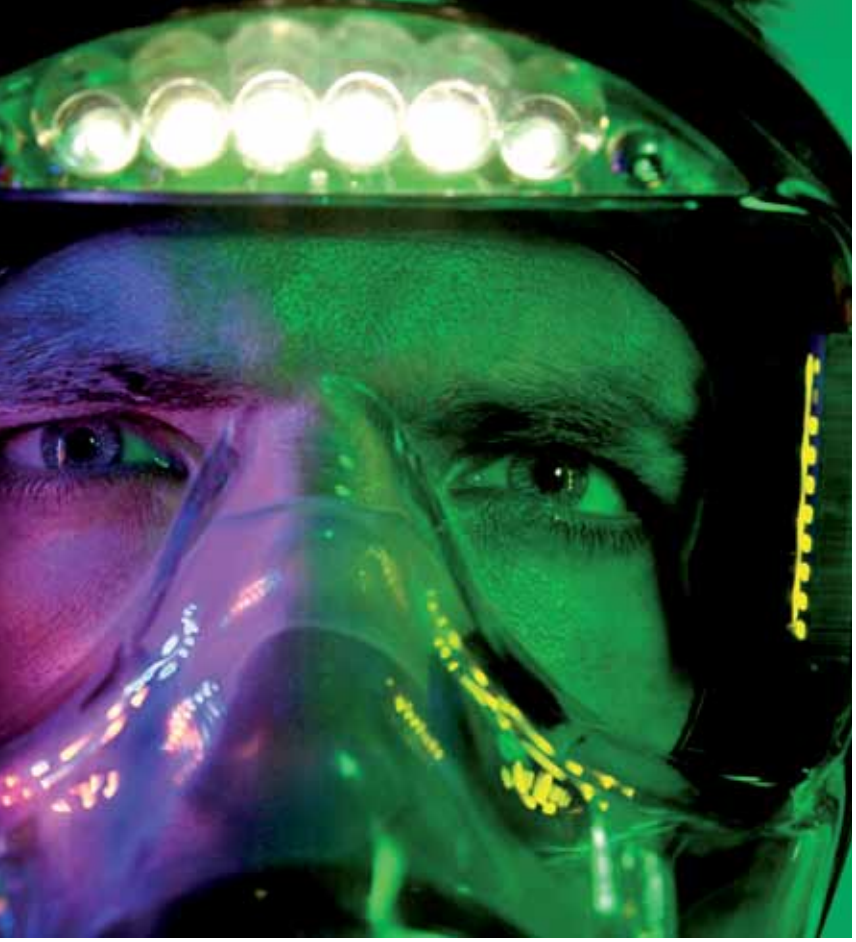
A universal download cradle makes connecting to any of these systems a breeze and the download process takes only a few seconds (additional purchase).
• Commercial Divers - dive logging for OSHA requirements, personal use, and liability determination
• Dive Centers and schools / Instructors - monitoring the equipment and review the diver profiles for
ascent rate analysis, liability determination
• Product assistance – for a complete understanding of the full face mask operations (see below)
All professional divers will benefit from having the DDR installed on their full face mask.

Technical specifications

• Activation: Activates at a depth of 3 ft. Deactivates after about 3 minutes above 3 ft. Threshold and end timer are user-configurable.
• Sampling Interval: 10 seconds. User-configurable from 1 s to over 18 hrs. Capacity changes with interval (e.g. 1,500 hrs @ 10 s., 150 hrs @ 1 s.).
• Capacity: Approx. 1,500 hours of data profiles (depth & temperature). Based on standard 10 second sample interval.
• Working Limits: Depth, 500 feet. Temperature, -20° C to +40° C.
• Units: Software selectable view of measurement (meters or feet) and degrees (C or F).
• Downloading: Via exposed metal pads on case. Mates with universal download unit. Downloads to desktop, laptop, or Palm computers for profile analysis and logging.
• Size: 1.65” x 1.26” x 0.75” (42 x 32 x 19 mm)
• Lifetime up to 10 yrs, permanent lithium cell.
• Identification: Individually serialized both physically and electronically. Allows tracking of several devices on one computer.
• The DDR has been developed in partnership with ReefNet, Inc – Canada.

Maintenance table for DDR use

The DDR’s main target is to be helpful in the proper timing of service for your full face mask. Instead of relying on your annual service without the knowledge of what type of stress the mask has seen, utilize the features of the DDR to plan your maintenance schedule.
The dive time, max depth, average depth and average temperature of the water while diving may contribute to the wear and tear of some full face mask components.
By accessing our website (**www.oceanreefgroup.com/techservice.html**) and entering the DDR area, it is possible to calculate, using the DDR data from your own mask, whether service is required and in which specific area it is needed.



SDVL (Shield Display & Visor Lights)

>>>> Main unit

>>>> Waterproof connectors

>>>> Double PTT

Integrated data and illumination system

When checking important data (depth and air pressure) while diving, a diver usually has to look at a wrist computer to do so. When a diver's hands are occupied or when visibility is low, keeping track of one's gauges may be difficult.

With the SDVL, the depth and pressure data are comfortably displayed on the right and left sides of the Neptune Space visor. These two displays are accompanied by the Visor Lights installed in the top of the visor. The depth and pressure displays are activated the moment the diver enters the water. The visor light (made of 6 in-line LEDs) is easily activated by a switch on the right side of the mask and incorporated in the surface air valve.

The SDVL is composed of:

A **main unit** with a removable and rechargeable battery, fitted with a tank belt handle, low pressure and high pressure sensors, and wet switch contacts.

The **battery** may be easily unscrewed, recharged and replaced. It is protected by black anodized anticorodal housing, with an overpressure valve to prevent explosions in the case of a battery malfunction. There are two o-rings on the battery body that ensure an even seal in case of an incidental partial unscrewing.

A 110/220 volt battery charger is supplied with the SDVL.

A **High Pressure hose** to be connected to your first stage.

A **wire** connecting the main back unit to the mask, which is provided with two waterproof multi pin connectors for quick connection and removal.

A **double PTT button unit** to control the on/off of the visor light, the brightness of the visor light, and the on/off of the depth and pressure display LEDs (if not exceeding the preset safety limits shown later).

Two **LED displays** for the tank pressure status and the diver depth. The LEDs work by a reference bar and 10 LEDs showing the present data. It is an analogical/comparative display that gives the diver an immediate reminder of tank consumption as well as where the diver is in correlation to a 50 meter/164 feet of water depth.

Powered by	9.6 volts 4000mA ni-mh battery
Autonomy (with 60% of the LEDs turn on)	48 hours
Low battery autonomy (after alarm starts)	30 min (starts Under 6.2 volt)
Depth/pressure tolerance	2.5m
Depth sensor - max pressure	10 bar
HP Air pressure sensor max applicable pressure	400 bar
Start up	Automatic (wet contacts)
Turn off	Automatic
Alarms	Low battery - Depth > 50 mt/165 feet - Out of air
Weight of main unit (outside of the water)	1.5kg
Hp hose with swivel	Enclosed
Charger	100/250v 16v 50-60 Hz -max 150mA 25W

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watch the video

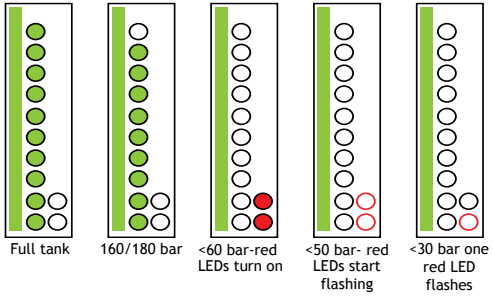
SDVL (Shield Display & Visor Lights)

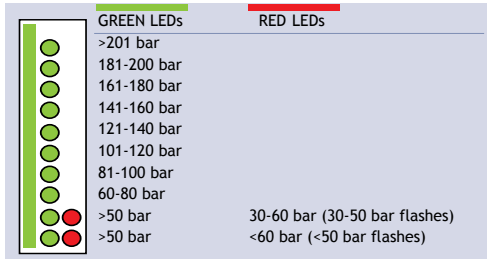
How the SDVL works during a dive

The SDVL turns on automatically as the diver enters the water and the unit gets wet. All LEDs remain turned on for a few seconds to show that the unit is working properly. While diving, the two LED bars turn on, depending on tank pressure and depth (see attached chart). The LEDs brightness can be adjusted by means of the control button, adapting to environmental conditions (day or night diving, cave diving…). To achieve this, hold the SDVL control button pressed until the desired intensity is reached. The LED bars can be switched off and on by pushing the control button quickly. For safety reasons, the two bars will turn on automatically if the tank pressure gets below 50 bar or if you dive deeper than 40 meters. The depth LEDs have 3 different colors (blue = from 0 to 20 meters; yellow = from 25 to 40 meters; and red below 40 meters) to report ergonomic information to the diver.

Pressure

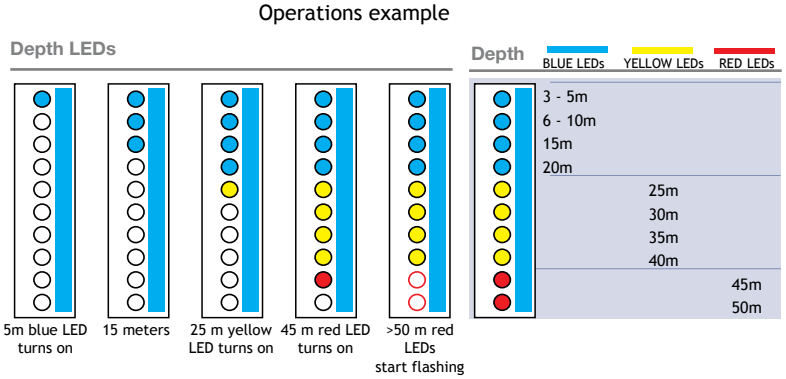
The air pressure display has two sets of LEDs. One is the reference bar, where various green or red LEDs show the tank pressure level (see attached schemes). Regarding the reference line, the diver will have an idea of how much air remains in their tank. Flashing red pressure LEDs advise the diver that their air reserve is running dangerously low.





Depth

At the beginning of the dive only the reference bar turns on. Once the diver descends past 5 meters/15 feet the LEDs will light up accordingly, giving a reading of corresponding depth. At 45 meters/130 feet the LED turns red.
At 50 meters/164 feet the LED red light flashes. It is important to remember that the SDVL is a support system and **NOT an alternative to the conventional pressure and depth gauges, or computers**. The SDVL provides "at a glance" information, allowing the diver to quickly evaluate the relative conditions (air supply and depth) of the dive.



Available configurations	
SDVL mounted on a PREDATOR m/l black	OR025010
SDVL mounted on a SPACE m/l black	OR025008
SDVL mounted on any other mask (mask sold separately)	OR025004

Visor lights

Integrated Head light with 6 Powerful LEDs

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The on/off switch is installed in the surface air valve port, without impairing the function of the SAV.

Features

> 75-lumen output/LED
> 100,000-hour light life
> 12 degree beam angle
> Light color TYP 5,500 – MAX 10,000 K°
> 3 hours burn time, depending on the type of rechargeable battery
> Waterproof to 80 m (260 ft)
> Rechargeable CR 123 3v lithium battery included
> 12v battery charger
> Vehicle power connector cable included.

NOTE: These lights are not designed to be a primary light source.

Visor Lights are available pre-assembled on a mask (on demand) or may be applied on any Neptune Space using prepared adhesive tape (coming with LEDs sticker).

neptune space			
Visor Lights pre/assembled on Neptune Space Predator mask	black	medium/large	OR025006
Visor Lights pre/assembled on Neptune Space mask	black	medium/large	OR025005
Visor lights, pre assembled on any Neptune Space mask (mask sold separately)			OR024502
Visor lights (applicable on any Neptune Space mask)			33380

>>>> Magnetic switch

>>>> Easy battery replacement

>>>> Charger

Neptune H08 helmet

This helmet is specifically designed to be used with the Neptune Space, Raptor, Predator and IRON MASK.
It was created to provide impact resistance during heavy activities where head protection may be needed, such as cave, operations under the ships keel or dangerous jobs. The GSM G-Power SL may be incorporated into the helmet, which makes it a very unique, lightweight, compact, underwater communication and protective piece of equipment.

The helmet's patented design provides an ultra snug and stable fit. The lightweight, streamlined design and soft foam cushion provides total comfort and freedom of movement. The Neptune H08 helmet is made from the most revolutionary high impact resistant plastics, designed to withstand years of exposure from saltwater and direct sunlight. The Lycra rash-guard sleeve prevents neck rash for maximum comfort during long sessions. The 2mm thick shatter proof plastic shell combined with a molded soft foam lining provides an ultra lightweight layer of defense. The H08 helmet offers protection by providing coverage to the temple area and ears. The helmet is also uniquely shaped to have a high cut shell for total peripheral vision. The H08 helmet is secured by strong nylon webbing to stay on no matter what you put it through.
The helmet's soft foam lining is molded from closed cell non water absorbent foam and is uniquely shaped for rapid water drainage and maximum comfort. The unit includes a protective carrying bag and is available in 2 colors and 4 sizes.

neptune H08 Helmet

■	Black rubber	Medium	OR23099
		Large	OR23100
		X-Large	OR23101
		XX-Large	OR23102
■	Silver	Medium	OR23104
		Large	OR23105
		X-Large	OR23106
		XX-Large	OR23107

Optional Accessories








Optical Lens Support (code 33299)

A frame specially designed for the Neptune series of masks which allows the use of standard optical lenses (not included) while diving. Both lightweight and strong, the frame can be easily inserted and removed.

Glacier Strap (code OR002902)

The Glacier Strap is designed for low temperatures and extreme condition dives. It is made of HNBR compound rubber and is very stable (with elasticity and tearing resistance) at temperatures lower than -10° C. HNBR has a very high resistance against aggressive chemicals and solvents. The design of the strap allows for comfortable adjustment, ease of removal, and high tech performance.

Quick Connect hoses & Adapter

Extraflex Quick Connect Hose (code OR024998)

This device allows for quick and easy connection and disconnection at the 2nd stage.
800 mm hose made by four layers technology with an inner layer of non toxic polyurethane blend, first reinforcement in polyester, thermo-rubber jacket and polyethylene external anti scratching reinforcement.
Also available in 1200 mm (48”) yellow (code OR024997).

Extraflex Commercial Quick Connect Hose (code OR024996)

This quick connection is made for commercial & professional applications. Made of chromium plated brass, it is a sturdy unit that requires two hands to disconnect. The length of the hose is 800 mm (32”). The hose is made by Extraflex.

Standard 9/16” to Quick Connect adapter (code OR024995)

Made of chromium plated brass, this device allows you to turn your standard regulator hose in a Quick Connect Hose (male part included).

Quick Connect Hose (code 33032)

800 mm rubber made hose, it allows a quick and easy connection/disconnection at the 2nd stage. Also available in 1200 mm (48”) black rubber (code 33018).

Commercial Quick Connect Hose (code 33072)

Identical to the OR024996 but with rubber made hose – 800 mm (32”).

Dual Tank Valve (code 33049)

This device permits the connection of the Space regulator to two different gas sources (air/nitrox), allowing alternate use of gases without removing the full face mask. The dual tank valve is not available in the USA or Canada.

Swivel Connection (code 33033)

Made of chromium plated brass, this device allows freer movement when attached to the second stage. The swivel connection can be used in conjunction with the quick connect hose.

Optional Accessories

Neptune Mask Measuring Kit (code 33075)

For determining mask size, this kit contains the following items:
> Measuring tool (caliper)
> Full face mask size recommendation chart
> Measuring instructions.

Use of conventional regulators

A special adapter allows the connection of several kinds of regulators. The adapter is available in two sizes, medium (standard) and small. This adapter fits in place of the surface air valve.
(Code 33020: S, code 33021: M)

Neptune Drinking Device

This accessory may be used with the Neptune Space and allows the diver to drink while underwater. The drinking device connects on the right octopus port and requires the ori-nasal mask to be changed. A rotating straw sits inside the mask. A valve on the drinking device tube allows the diver to control the flow of liquid through the device. The drinking device kit must be assembled by an authorized OCEAN REEF Service Center.
The Drinking Device Kit contains the following items:
> Internal silicone rotating straw
> Drinking device connection to the mask
> Tube, valve, and quick connection
> Neptune water pouch

Drinking device kit only (code 33080)
Drinking device kit & mask assembly (code 33081)
Neptune water pouch, 1 L (.26 gal) (code 33082)

Use of the drinking device is strictly limited to commercial and expert certified divers.

>>>> Quick Connections

>>>> Neptune Water Pouch

>>>> Valve

Wireless Communication Systems

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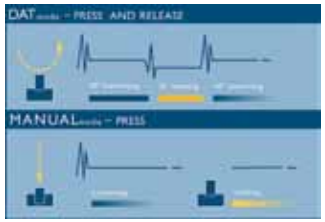
GSM DC™ (code 33122)

The GSM DC™ underwater transceiver unit incorporates the latest innovations in underwater ultrasonic 2-way radio communication. The unit features a digital driver for verbal message equalization, an automatic system for activating transmission (DAT™), and a double transceiver channel. The standard frequency (channel 1) is the same for all Neptune System units, so it is possible to communicate with any other GSM G.divers, GSM DC™, GSM G-Power, GSM G-Power SL, GSM CUBE3, M101A G.divers receive units and M105 Digital / M100 G.divers surface units. The GSM DC™ is a dual channel (DC) unit, which means it is equipped with two transceiver channels. By pressing buttons "A" and "B", it is possible to change the frequency channel. Any time the channel is changed, a recorded message informs the diver of which channel has been activated (channel 1 or channel 2). The two channels allow different diving groups to operate in the same area with limited interference and confusion. The GSM DC™ sound quality depends upon the D-Mic microphone, a special dynamic microphone with high acoustic qualities, and the microprocessor (DSP), which takes the digitized vocal message and filters out unwanted noise such as exhaust, air bubbles, and/or mask vibrations.

The D-Mic is the special microphone for all OCEAN REEF underwater communication units. The housing has a hydrophobic membrane which is permeable to air, but prevents water from passing through the electronics.

The membrane's reduced thickness limits any reduction of the vocal signal. The permeability of the membrane keeps the internal pressure equalized with the external pressure, enabling the microphone to be used at practically any depth. The D-Mic is installed onto the transmission button contacts and can be made compatible with all previous GSM versions by slightly altering the transmission button contacts; this can be performed at any OCEAN REEF service center. When speaking inside a full face mask, a series of reflections and vibrations, called distorted frequencies, are generated. "High frequencies" are caused by mask visor vibrations. "Low frequencies" are caused by the noise from air bubbles. If they are not removed, these distorted frequencies will be amplified and transmitted to the receiver unit, resulting in low intelligibility. Our DSP microprocessor removes these frequencies making communication loud and clear. The GSM DC can be used in two unique modes, manual transmission mode and automatic transmission mode. To start communication in manual PTT (Push to Talk) mode, press and hold the "A" button (see picture) to transmit and release the button to receive. The "B" button activates and de-activates the automatic transmission mode, DAT™ (see later). The GSM DC™ automatically begins receiving capabilities upon contact with the water.

DAT™ (Digital Activation Transmission)



This automatic activation system is an exciting innovation in underwater communication exclusively from OCEAN REEF.

The DAT™ system allows the option of transmitting in a hands-free mode rather than manual mode. To activate transmission, quickly press and release the "B" button. Once the button is pressed, a series of impulses are sent out, automatically keeping the unit in transmit mode for 30 seconds. After the initial 30 seconds of transmit mode, the unit will return to receive mode for 20 seconds accompanied by a series of impulses in a different tone from the first. This cycle continues until the "B" button is pressed for at least one second, which returns the unit to manual mode. DAT™ is useful when it is necessary to have both hands free while transmitting, making diving more comfortable and safe. Another benefit of the DAT™ system comes in the case of an emergency; by activating the DAT™ a series of impulses will emit every 30-20-30 seconds, which can be received at a great distance by search and rescue workers and other divers.

NACS™ (Neptune Adjustable Communication Support) (code 33054)

The patented NACS™ is an adjustable support arm for the GSM G.divers, GSM DC™, GSM G-Power, GSM CUBE3, ALPHA PRO, UWCP or M101A G.divers receiving unit. It is installed on the Neptune mask on the left side of the visor and prevents the communication unit from hanging on the mask strap. By relieving the weight of the communication unit, the NACS™ also allows the mask strap to slide easily through the buckle; thus, the strap can stay loose while the mask is donned and the communicator stays out of the way. The NACS™ can be adjusted for tilt and distance between the communication unit and the visor.

All GSM models must be used with the NACS™.

Wireless Communication Systems

GSM G-Power (code OR033124)

The GSM G-Power is a single channel powered version of the GSM DC. This unit has been developed for divers requiring a very long range with compact/light underwater communication units. Depending on the surrounding environment conditions, the GSM G-Power can communicate with any other OCEAN REEF communications system (underwater and surface) with a range of 500 meters (1500 feet). The unit also has the autonomy of approximately 25 hours (in standby mode).

The second built-in button of the PTT system, allows the diver to adjust the volume of the speaker by choosing the best level, according of her/his needs (i.e. use of a suit hood). The shape of the unit is protected by a “rubber surface treatment,” which reduces the adhesion of air micro-bubbles, and improves underwater communication. The GSM G-Power is equipped with one channel.

>>>> MHA-2 with helmet H08

GSM G-Power SL (code OR033125)

The GSM G-Power SL is a version of the GSM G-Power which also includes a headset. This unit has all the same features as the GSM G-Power, including: range of operation, excellent autonomy, audio and volume adjustment, main unit surface treatment, however also includes a twin speaker headset. This unit can be used under a suit hood or with the OCEAN REEF H08 Helmet.

The headset, made with two special speakers, is connected to the main unit by a cable and waterproof rubber connector. The main unit can be attached to the jacket shoulder by using the included and incorporated stainless steel clip. The underwater rubber connection makes it possible to disconnect the unit from the headset/mask system during a dive. This unit is especially recommended for divers working in loud environments or for those wearing a hood or the H08 Helmet.

M101AR (code 33130)

The M101AR is a receiving unit for underwater video cameras. The unit connects to the “Mic” port of an underwater video camera to record conversations among divers and/or with the surface. The M101AR cable (1m/3ft) must be connected to the audio/video port of the video camera housing while the receive unit is attached to a Neptune mask, in order to control the quality of the recorded audio. The M101AR may hang on the camera housing or BC jacket.

DAMPER for wireless communication units (code OR023006)

When communicating underwater at short distance or in closed environments, it is often possible that audio distortion is caused by excessive transmission strength. The transmitters are relatively powerful, and if they are used in a pool or very close to each other, distortion can be created. The audio goes “off the scale”, and becomes difficult to understand.

The “Damper” can be inserted on the antenna; it is made of a spongy material with many tiny air pockets. The combination of the two materials creates the filter needed to reduce the transmission power as needed and make conversation intelligible again.

Wireless Communication Systems

M105 Digital (code OR033126)

The M105 Digital is a surface to diver communication unit which allows surface personnel to talk with divers in the water and vice versa. The unit uses a 6V DC lead battery, allowing up to 48 hours of operation, or may be hardwired to a 12V DC source. The system is activated only when the transducer is connected, preventing unwanted loss of battery power. To start communication, the transducer must be lowered into the water; the standard cable length for the transducer is 10m (33 ft). Transmission is activated by pressing the microphone button, which will emit a short beep letting divers know transmission is about to begin. It will return to receive mode when the button is released.

The M105 Digital comes standard with the following items:

> Headphone connection
> Volume control
> Speaker
> Water resistant case w/ pressure compensation valve
> Battery charger
> Easy to read LED battery tester which shows the power status of the battery
> Transducer cable bag
> 10 meter (33 ft) antenna
> Microphone

Available accessories:

> Audio out cable (code 8590)
> Headset (code 8589)
> External power cable 12V (code 8594)
> Tuner for >50 meters M105 Antenna (code OR008609)
> Splitter for connection of 2 antennas at M105 or M105DC (code OR023001)
> Mixer for audio output (code OR006512)

It is possible to purchase a “portable” battery tester (code OR023003) for previous M105 BASIC units. A portable 9V battery tester is also available (code OR023002) for all GSM G.divers, GSM DC, GSM G-Power and M101A G.divers units.

M105 Mixer (code OR006512)

This accessory allows for the connection between the M105 Digital/M105 Digital DC to an external amplifier or recorder. The Mixer takes its power directly from the M105 and does not need a separate battery. Audio output cables (w/RCA connectors) are not included.

M105 Digital DC (code OR033128)

This unit has the same characteristics as the M105 Digital, but with the addition of a second channel. The operator may easily switch from channel 1 to channel 2. When switching between channels, a recorded message informs the operator of which channel has been activated.

specifications

	GSM DC™	GSM G-Power	GSM G-Power SL	M-105 Digital w/battery tester	M-105 Digital DC w/battery tester
Code	33122	OR033124	OR033125	OR033126	OR033128
Type	Wireless ultrasonic	Wireless ultrasonic	Wireless ultrasonic	Wireless ultrasonic	Wireless ultrasonic
Activation	Automatic	Automatic	Automatic	Upon connection/switch	Upon connection/switch
Transmission	PTT	PTT	PTT	PTT	PTT
Receiving	Automatic	Automatic	Automatic	Automatic	Automatic
Speaker volume adjustment	No	Yes	Yes - separate headset	Yes	Yes
System type	H-SSB	H-SSB	H-SSB	H-SSB	H-SSB
Frequency	32.768 KHz ch. 2 41.000 KHz	32.768 KHz	32.768 KHz	32.768 KHz	32.768 KHz ch. 2 41.000 KHz
Working range(*)	200m/600ft	500m/1500ft	500m/1500ft	200m/600ft	200m/600ft
Rated depth(**)	40m/120ft	40m/120ft	40m/120ft	Surface unit	Surface unit
Powered by	9V alkaline	9V alkaline	9V alkaline	Rechargeable 6V lead	Rechargeable 6V lead
Autonomy(total)	9h	25h	25h	48h	48h
Low battery autonomy (after alarm starts)	1h	1h	1h	1.5h	1.5h
Low battery alarm	1 beep/30 sec under 7.5V	1 beep/30 sec under 6.8V	1 beep/30 sec under 6.8V	1 beep/30 sec under 4.8V	1 beep/30 sec under 4.8V
DAT™	Yes	No	No	No	No
Transmit/receive cycle	Yes, DAT™ mode-30 sec transmit-20 sec receive	No	No	No	No
Squelch	Automatic	Automatic	Automatic	Automatic	Automatic
Weight with batteries	370g/12.9 oz	370g/12.9 oz	370g/12.9 oz	2.3kg/5 lbs	2.3kg/5 lbs

(*) The operating distance is affected by obstacles, air bubbles, thermo-clines, temperature and salinity

(**) Does not include other depth limits that may apply

Multi-task Communication System

>>>> wireless / ultrasonic

>>>> hardwired

>>>> with a VHF radio

GSM CUBE³ (code OR033131)

The GSM CUBE³ is an underwater communication unit capable of operating wireless/hardwired or interfaced with a VHF radio!! 3 units in one!
If the unit is connected to the Alpha Pro X-DIVERS surface unit via cable, then communication is on full duplex with the surface unit (no need to press the transceiver button to communicate). At the same time, the unit is capable of communicating with other wireless underwater units such as the OCEAN REEF GSM G.divers, GSM DC, GSM G-Power and GSM G-Power SL, M105 and M100 G.divers.
By pressing the button of the PTT the unit is transmitting on channel 1 of ultrasonic frequency (channel 1 - 32.768 kHz). The GSM CUBE³ can be connected to a VHF radio (see page 30) through the waterproof carrying bag and other relevant connectors and interfaces.
The GSM CUBE³ is equipped with a special plug for the six pin connector which can be used when you don't need to connect the cable. You can also connect and disconnect the unit to/from the cable while diving.

Operating MODES	
By itself and no cable connect	wireless
Connected to an Alpha Pro X-DIVERS surface unit by cable	hardwired
Connected to an Alpha Pro X-DIVERS surface unit and by itself	hardwired/wireless
Connected to a VHF unit	becomes a GSM VHF (see page 34)

Communication Units Accessories

GC 2008 (code OR006509)

OCEAN REEF communication units are designed to be user friendly. One of our main commitments is to respond to the variety of diver operative applications, mainly professionals. This is now possible thanks to the GC 2008 adapter which interconnects existing communication parts, thus creating the possibility for new communication systems.

For example, by using the GC 2008 it is now possible to interconnect the surface unit of the Alpha Pro X-DIVERS (hardwired system) to the microphone headset assembled (MHA-2) supplied with the GSM GPower SL, or separately. This allows the diver to operate via cable by switching from the GSM G-Power SL (installed in the H08 Helmet) wireless unit to the hardwired full duplex and headset system.

Another option is to connect the MHA-2 to the surface unit of the ALPHA UWCP (underwater cellular phone – ask for detail) by using the GC 2008. The GC 2008 can be installed underwater.

COMBINATIONS

GSM G-Power SL	←	→	MHA-2
Alpha Pro X-DIVERS surface unit	cable	GC 2008	MHA-2
Alpha UWCP surface unit	cable	GC 2008	MHA-2

GC 2010 (code OR006519)

The GC 2010 allows the diver to connect and use simultaneously the MHA-2 with the G-power SL main wireless unit and the hardwired connection to the alpha-pro x-divers cable.

By pressing the PTT button on the MHA-2 you can communicate both wireless and hardwired at the same time, without pressing the PTT button only hardwired communication is possible. The unit is always receiving and can listen to both wired and hardwired incoming communication (if connected to both systems).

Hardwired Communication Systems

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>>>> possibility to customize the cable length or make extensions

ALPHA PRO X-DIVERS (code OR033132, includes surface and UW unit + 50 meter cable and bag)

The Alpha Pro X-DIVERS is a hardwired, full-duplex underwater communication system for conversations between the surface and one or two divers. The system consists of the following items:

Surface unit (if sold separately code OR033133)

> 2 ports for 2 communication cables
> On/off and volume adjustment switches
> Microphone
> Switch for communication between surface & diver 1, surface & diver 2, surface & diver 1 & diver 2
> Headset port (headset optional)
> External 12v power port (cable optional)
> Battery charger port
> Audio/video recall
> Incorporated speaker
> 12V rechargeable battery
> Underwater unit volume adjustment (for both divers)
> Stand-by autonomy: 24h

Professional surface/diver cable (50 meters -165 ft long) (if sold separately code OR033134)

The cable includes a yellow rope exterior. The cable's diameter is 10mm with a resistance of more than 4000 newton. The cable includes a waterproof rubber 6 pin connector. The Professional cable is also available at any length on request. A carry-bag is available with the cable and sold separately as an accessory.

Underwater unit (if sold separately code OR033135)

> Waterproof piezoelectric speaker
> D-Mic microphone
> Full duplex system
> Audio/video recall button

By adding an additional surface/diver cable and underwater unit, the Alpha Pro X-DIVERS may communicate with two divers at the same time. It is also possible for the surface to switch between each of the divers.
(Possible configurations: surface/diver 1, surface/diver 2, surface/diver 1/diver 2. If the unit is set for surface/diver 1/diver 2, the two divers would also be able to communicate with each other.)

Headset + Mic for Alpha Pro X-DIVERS (code OR023004)

Connected to the Alpha Pro XDIVERS surface unit allows for a full duplex conversation, bypassing the unit speaker.

alpha pro x-divers

ALPHA PRO X-DIVERS	110/220V	OR033132
ALPHA PRO X-DIVERS - surface unit only	110/220v	OR033133
ALPHA PRO X-DIVERS prof cable	50 meters	OR033134
ALPHA PRO X-DIVERS UW unit (w/PTT)		OR033135
Professional Cable w/rope yellow	per meter	8488
Water proof rubber connector 6 pins		OR005270
DIN connector to surface unit - ALPHA PRO X Divers		OR008616
Professional ALPHA PRO Cable 50 mt bag		8686
Professional ALPHA PRO Cable 75-100 mt bag		8687

Cable floater (code OR015001)

A usefull accessory to keep the audio or video cables floating. Each package contains three pcs and two Velcro straps keep the floater in position around the cable.

Air Control Module - customized unit

Air Control Module – ACM

OCEAN REEF ACM, Air control module is a lightweight, portable control box for use in surface supplied air diving operations.

The **ACM** controls the diver's air supply, communications and monitors the diver's depth. It allows two divers full duplex underwater communication.

The **ACM** is also available without communications.

The air supply can be either from a low pressure compressor or high-pressure cylinders. The **ACM's** adjustable first stage regulator reduces the high-pressure air and supplies low pressure through the umbilical to the diver's breathing system. High pressure yokes with DIN adapters permit U.S. standard scuba cylinders or DIN valve cylinders to be used. A low pressure air supply fitting allows for a L.P. compressor to be used as the primary air source.

A complete pneumo system with dual reading gauges (both US Standard and Metric) is provided for each diver, as well as a shut-off/bleed system that uses two high-pressure feed lines which allows changing of used cylinders without interruption of the diving operation. Shut off valves allow the isolation of each diver's air supply. The lightweight, high impact polyethylene plastic case and extra thick corners ensure exceptional strength and a long work life. An O-ring seal protects hardware from moisture when the case is closed.

Features

A. The Communication unit is a multipurpose intercommunication system that provides reliable and clear communications between a topside operator (tender) and one or more surface-supported divers.

B. Depth Gauge/Pneumo Systems: Dual reading gauges continuously monitoring the diver's depths from 0-70m (0-230ft). Maximum recommended user depth: 130 FSW.

C. Depth Monitoring/ Pneumo Knob is used to meter the flow of air used for depth measurement.

D. The Stainless Steel Air Outlets fittings connect the diver's air supply hose to the **ACM**, providing a strong, reliable, corrosion resistant connection.

Shut-off valves allow the isolation of one diver's air supply from the other.

E. Regulator Adjustment Knob controls the air pressure delivered to the diver's umbilical. Variable pressure settings from are obtainable.

F. Selector Valve Handle is used to choose either one of the air supply cylinders. Individual cylinders may be changed out with no interruption of the dive.

G. High Pressure (HP) Supply Gauges directly monitor the pressure in each of the air supply cylinders.

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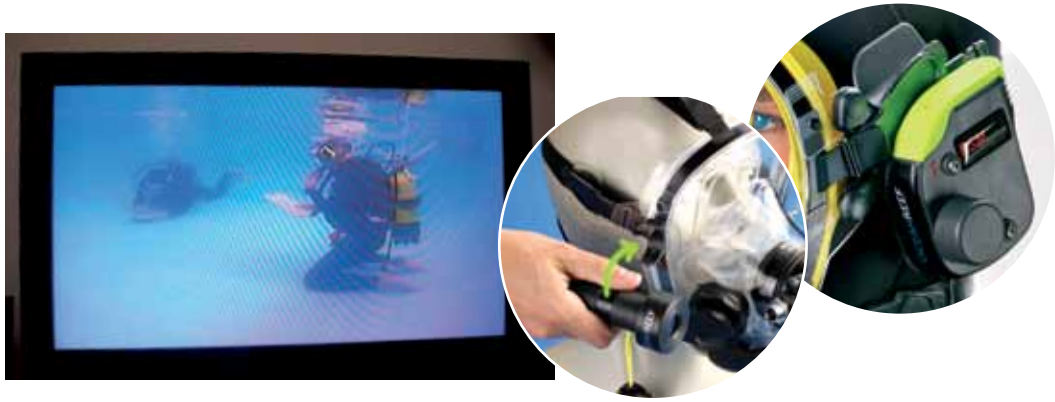
Special and Audio/Video Systems



Gamma 105 (OR033107 NTSC, OR033108 PAL)

The Gamma 105 is an integrated audio/ video system consisting of the M105 Digital and a CCD Micro Video Camera, which may be installed in an underwater housing, attached to a Neptune mask, or held by the diver. This system makes it possible for those on the surface to communicate with an unlimited number of divers, within the range of the M105, while simultaneously monitoring the underwater video footage. The camera is hardwired via a 50 m (164 ft) cable to a 7 inch color LCD monitor. The Gamma 105 system includes the following items:

> Ultrasonic surface communication unit: 10 m (33 ft) transducer cable, microphone, external power supply cable, audio port, headphone port, volume control, and loudspeaker
> CCD Micro Video Camera with underwater housing and mounting bracket
> 50 m (164 ft) camera cable
> 7 inch 16:9 color LCD monitor, speaker, audio and video port, brightness and color controls
> Video port for external video recorder or monitor
> 12V battery
> Battery charger connector
> 12V battery charger

Gamma ALPHA (OR033104 NTSC, OR033105 PAL)

The Gamma Alpha is a hardwired audio and video communication system. The ultrasonic wireless unit of the Gamma 105 is replaced by an Alpha Pro X-DIVERS full duplex unit.
The surface unit may be connected by audio and video to two divers.
The audio characteristics are the same as the Alpha Pro X-DIVERS.

The installed 7" LCD color monitor displays the video feed coming from the underwater camera of diver 1 or diver 2. It is possible to switch the video(s) to external monitors/recorders (there are 3 different possibilities of video recording: diver 1 through video out plug #1, diver 2 through video out plug #2, or a third option where one can record the same images you see in the 7 inch monitor.

The unit consists of:

Surface unit with:
> 7 inch 16:9 color LCD monitor, brightness and color controls
> On/off and speaker volume adjustment switch
> Speaker
> Microphone
> Switch for communication between surface & diver 1, surface & diver 2, surface & diver 1 & diver 2
> Headset port (headset optional)
> Audio/video recall from divers
> 12V rechargeable battery + battery charger
> 2 plugs for audio connections to divers
> 2 plugs for video connection to two divers
> 3 video out plugs
> Underwater unit volume adjustment (for both divers)
> Switch for the video: 2 positions to show the video of diver 1 or diver 2
> External power charger, 12V (cable optional)
> Stand-by autonomy: 24h

One Professional surface/diver cable (50 meters -165 ft long) (if sold separately code OR033134)
The Cable includes a yellow rope exterior. The cable's diameter is 10mm with a resistance of more than 4000 newton's. The cable includes a waterproof rubber 6 pin connector. The Professional cable is also available at any length on request.
A carry-bag is available with the cable and sold separately as an accessory.
One Underwater unit (if sold separately code OR033135)
> Waterproof piezoelectric speaker
> D-Mic microphone
> Full duplex system
> Audio/video recall button
One video cable with yellow rope surface/diver cable (50 meters -165 ft long) (if sold separately code OR008575).
One CCD micro video camera with underwater housing may be attached to any Neptune Space mask or held by the diver. (If sold separately code (OR008573 NTSC, OR008574 PAL).-

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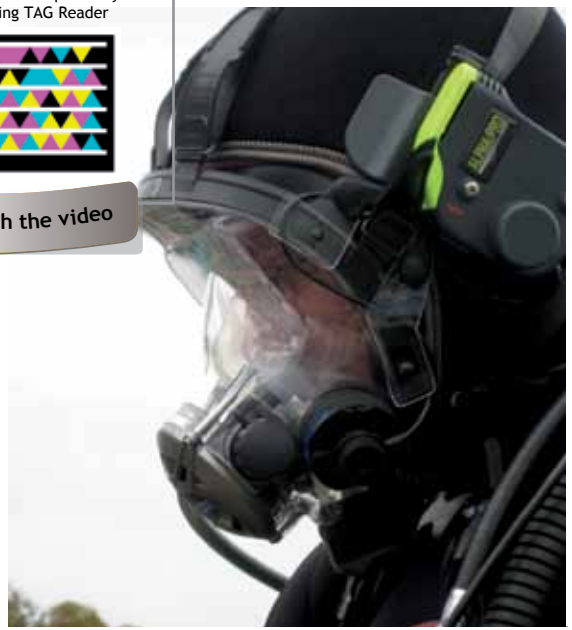

GSM VHF (basic configuration code: OR033123)

The GSM VHF is a very unique communication system with the integration of Ultrasonic/ Underwater communication features and the VHF long distance communication requirements. It is mainly dedicated to Rescue Team Divers and was developed thanks to the collaboration of the Italian Red Cross.

The unit was created to the GSM standard and is hardwired to a specially modified waterproof radio carrying bag. A variety of different VHF radio models can be contained and interfaced to the unit. When purchasing, it is necessary to specify the model of radio desired and OCEAN REEF will custom make the required interface cabling.

The waterproof radio carrying bag may be connected to the jacket or shoulder of the diver (Carabineer and strap are included in the package). The GSM may be disconnected from the waterproof radio carrying bag by a rubber waterproof installed connector. It allows the diver to separate the mask/communications unit from the VHF radio module.

When the diver is underwater, he/she can communicate with other divers, as well as the surface by having the GSM unit act as a PTT unit. While at the surface, the radio operates and receives audio through the speaker of the GSM unit, and transmission is achieved by pressing the PTT on the masks built in microphone. The diver does not need to press any button to switch from an ultrasonic diving condition to air VHF communication. A diver can communicate long distances with any operator on land or ocean surface, including helicopters and boats (depending on the radio installed). One does not need to remove the mask to accomplish this; the diver can continue to operate by wearing the mask and the underwater communication unit. The two systems (underwater and VHF) have completely independent power sources. The VHF continues to work even if there is no battery in the main unit of the GSM or if it is switched off. The diver may decide the VHF band and channel before or during the dive (this feature is in accordance to the radio model) The GSM VHF does not come standard with the radio. However, it may be supplied separately. Use of VHF radio requires local authorities' permission.

Neptune space nozzle adjustment tool (code 9754)

An essential tool for every Neptune System Service Center to adjustthe 2nd stage according to the factory specs.

Neptune space regulator adaptor (code 9794)

This tool fits on a conventional test bench or may be used with the portable one. It is useful for a technician who may set up and check a Space mask regulator prior to mask assembly.

Space servicing kit (code 9799)

Contains the tools required for servicing the Neptune Space mask in combination with the nozzle adjustment tool.

Portable test bench (code 9805)

Portable test bench for OCEAN REEF full face masks and conventional regulators.

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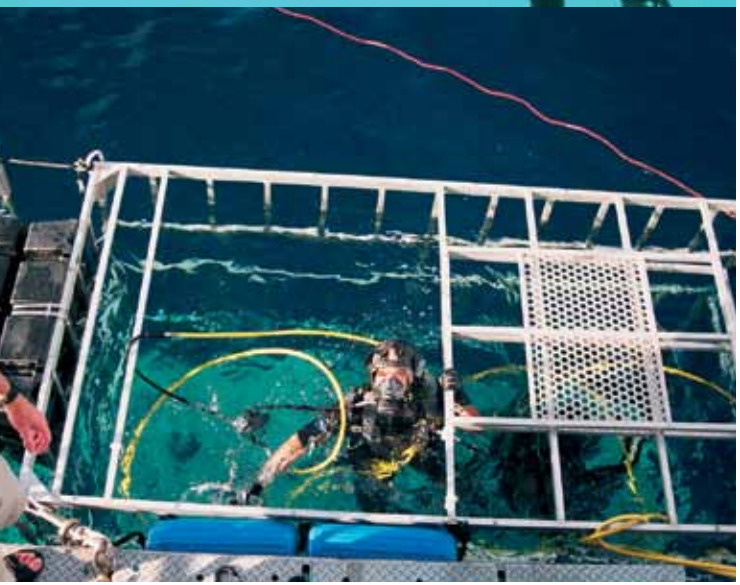

Testimonial

“As adaptive scuba captures the imagination of the dive industry, instructors around the world will come to employ full face mask technology like Ocean Reef to work with blind, quadriplegic and cognitively impaired divers.”
“Diveheart has successfully employed Ocean Reef full facemask technology to introduce new and exciting protocols for blind and blind deaf divers, giving them unprecedented freedom and communication capability while enhancing the safety and enjoyment of adaptive scuba diving.”

“I would say that it was a pleasure using the OCEAN REEF masks recently with a blind diver… Diveheart uses the masks to guide and narrate to visually impaired divers and also uses the masks for its cognitively impaired and quadriplegic divers… it’s wonderful to have a tool like the OCEAN REEF mask to give a wider range of disabled divers the scuba experience.”

Jim Elliott - President
Diveheart

“Ocean Reef’s full-face masks and underwater communication systems are a key part of our four-times-weekly Kelp tank Dive Shows here at the Birch Aquarium. They allow excellent communication between our divers and the viewing public, a feature not normally enjoyed when using standard SCUBA equipment.
With the Neptune masks and AlphaPro sound system, our divers have their hands free to feed the sharks, groupers and giant sea bass, all while carrying on a lively dialogue with our visitors.

Testimonial

All of our dive gear suffers some abuse from interactions with the larger fish while we're feeding them, and Ocean Reef has been outstanding when it comes to servicing their equipment, even soliciting our advice for improving their products.
Our live feeding shows are among the most popular attractions here at the Birch Aquarium, and Ocean Reef has been a major factor in helping us maintain that level of commitment to educating AND entertaining our visitors. We couldn't do it without them!"

Mark Ball - Lead Aquarist
Birch Aquarium at Scripps

"Thanks again for making OCEAN REEF a part of our adventures on Destination Truth. The masks added a whole new level of high-tech design and communication to our dive scenes that really helped the show. We hauled the masks and supporting electronics through more than a dozen countries and put them through a brutal field test in some of the harshest conditions on the planet. From the turbid and frigid lakes of Iceland to the toxic waters of a river in the Philippines, all of the OCEAN REEF gear held up without so much as a scratch. Not to mention that they were a blast to use."

Joshua Gates
Host/Producer - Destination Truth

"Full face masks are absolutely essential to my job. In fact, I'm not sure how we'd get the spectacular results my clients expect without the ability to communicate clearly underwater. I often run a team of safety divers, camera operators and underwater talent, all of whom are involved in an intricate dance of filming top order predators while relying on me to ensure their safety.
OCEAN REEF masks were an integral part of shooting Mythbusters' Shark Week 2008. With so many myths to bust or confirm, we required reliable full face masks that also look great on camera. The OCEAN REEF Neptune was exactly what the job required, and I was stoked on how comfortable they were even after an 8 hour day underwater!"

Luke Tipple
Shark Diving Adventure
Marine Biologist and Nature Production Consultant

"As the CEO of Shark Diver, I have come to depend on OCEAN REEF technology for simply outstanding underwater communication with our divers. The ease of use, the clarity of sound, and the styling of the units make them not only functional but cool to look at.
All our customers and research members that use the Neptune System comment on how user friendly and efficient it is. The communication units are able to give them the necessary real time access from staff underwater to staff on the surface. The ability to instantaneously communicate is critical to the efficiency of the shark research.

There are three things we need when we are in the middle of shark diving operations:
1.Mask view - when divers are facing 15 foot 2,000 lb Great Whites, they want as much view as they can get OCEAN REEF delivers.
2.Sound clarity - divers need to be able to understand each other on the first try down there. Again Ocean Reef is superior to other units we have tested.
3.Lastly, ease of use - our divers are often unsure about a full mask set up, until they try these units. Within 2 minutes you're set and ready to go. I not only suggest these

Testimonial

units to our divers, but our safety dive teams use them as well and we now insist on their use with film crews who use Shark Diver for shark related film shoots all over the planet. Look for us and OCEAN REEF on Shark Week 2008 this summer. You have excellent gear and we'll stand by your stuff anytime."

Patric Douglas
CEO Shark Diver

"Your high level of customer service and technical support exceeded anything ever experienced before personally in my over 23 years of experience as a dive professional working with various dive equipment manufacturing and retailing organizations... Again thanks for all your exemplary support and assistance to us over the past seven years."
"To my knowledge, Ocean REEF is the only manufacture of full face masks out there now with "sizing" catered to fit the smaller faces such as smaller female divers. Believe me it makes a world of difference for the 80% of my staff that falls into that category. In My opinion, you've hit a home run and are to be commended!"

"OCEAN REEF's Neptune II System has proven to be a huge success at the North Carolina Aquarium. Completing over 350 education dive shows a year on the OCEAN REEF wireless communications system has proven the Neptune II System is of high quality, which holds up extremely well under a demanding aquarium dive schedule."

Patrick Murphy - Dive Safety Officer,
North Carolina Aquariums

"Imagine being on the bottom of the Puget Sound in the middle of the night, circled by a half dozen 12-14 foot six gill sharks! Wearing an OCEAN REEF Neptune Full Face Mask, I was able to direct my underwater cameraman and give live "play by play" to the surface crew 60 feet above. All of this for the Discovery Channel special "Shark After Dark" airing this summer, during Shark Week. I also used the masks extensively while filming at Tiger Beach in the Bahamas, describing the action while our shark biologist conducted a hand-feeding experiment amidst 50 hungry lemon sharks. It was awesome! The masks, allowing me to describe the scene to the audience, gave the show an added a sense of immediacy,

and of course they worked perfectly. I could never go back to a traditional mask and regulator! I use the Neptune every time I go in the water."

Jeff Kurr - Producer
Host Shark Week

"Hi, I wanted to write you and tell that I bought your FFM and have had the greatest time using it. I was on the verge of giving up my diving because of asthma problems. The in mouth regulators were drying my throat out so bad it was me to have asthma problems while at depth. Then I saw your product on a web site that I often buy dive gear from. I read the specs and decided to give it a try, let's just say I am not only back to diving but diving more than I ever have before. So I just wanted to say thanks and keep up the good work!!!

Terry Martin

"The Oklahoma County Sheriff's Department Dive Team has been using the Ocean REEF Neptune System and underwater communication units for years. The team has the opinion that Ocean REEF full face masks are not just any piece of dive gear, but it is their life line and consider it an important safety tool during their recovery process. With the Neptune mask the divers can stay warmer in the cold water and are able to avoid contamination from diving environments. In addition, the mask allows ease while breathing, no fogging, a larger area of view, better security with a 360 degree of support from the mask strap, and all this at a great price. Our Dive Recovery Team loves the Ocean REEF Neptune System!"

Dale Autry
Oklahoma Sheriff's Dive Recovery Team Member

My choice for a full face mask is the Ocean REEF Predator. It's superior to other brands because it has greater visibility around the mask, it's more comfortable, easy to use, dependable, has lots of accessories and their parts are more reasonable then some of the other brands. I recommend this mask for any level of diver. You won't be disappointed.
Thanks Ocean REEF for all your support and help in making my dives successful.

Matt S. Johnston
Oklahoma County Sheriff's Dive Team

Dear Ocean REEF,
I finally got to use my Neptune, and it was great. I have now used it 7 times in open water and have dived twice at the Baltimore Aquarium. I don't ever want to go back to the regular mask again. It was a real pleasure to experience a dry face, no foggy lens, and no jaw fatigue. I could spend all day under the water with this mask.
Yours truly,

John Hickman

"OCEAN REEF has become an integral component in my underwater film work. The Neptune System is very comfortable, provides excellent visibility, and makes using full face masks and underwater communications a pleasure!"

Jeremiah Sullivan
Inventor of the Neptunic Sharksuit
and adventure television personality

On behalf of the MISSIONE NATURA staff we wish to thank OCEAN REEF for all supplied diving equipment (full face masks w/accessories and communication units) The OCEAN REEF service and collaboration have been great!

Federica Morelli - Executive Producer
MISSIONE NATURA - L7TV - Telecom Italy group

We would like to thank for the products and service you granted during the RAI – Radio television Italiana and RAI International program: ABISSI.
The products were excellent and the communication have been great. It was very beneficial to use the OCEAN REEF products in our program.

Roberto Santillo
Managing Director - MARENOSTRUM

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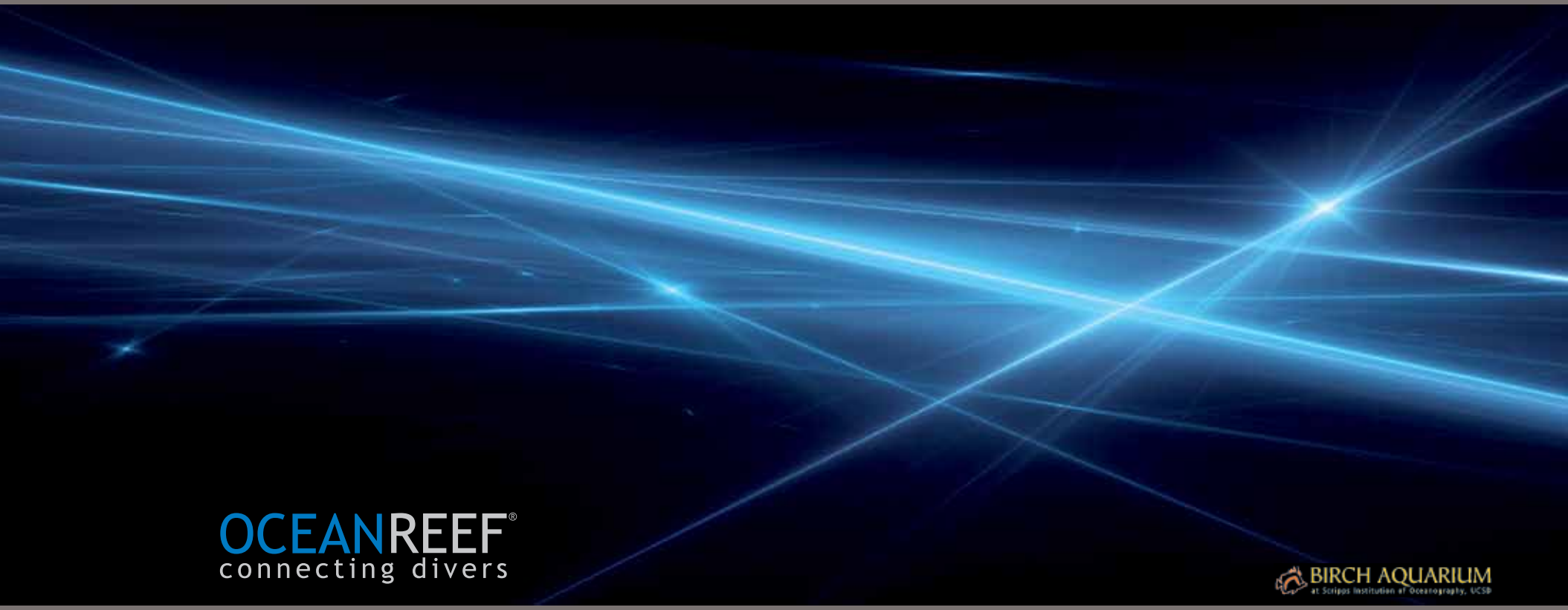
design by Sinergica photography by e-motion



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OCEAN REEF is a corporate partner with the Birch Aquarium at Scripps Institution of Oceanography